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ABSTRACT

Measures of adults' attitudes toward nuclear war are briefly discussed, and Mayton's Modified World Affairs Questionnaire (MWAQ) is described. The 23-item MWAQ was developed from Novak and Lerner's World Affairs Questionnaire, a nuclear war attitude measure by Mayton and Delamater, and related interview items by Jeffries. When the MWAQ was administered to 178 college students, five robust factors emerged: civil defense; escalation; nuclear war outcome; probability and worry; and patriotism. The five-subscale MWAQ was then administered to 615 undergraduate students. Test-retest reliability was acceptable, but internal consistency values for the patriotism subscale were low. McClenney and others developed a 42-item questionnaire based on Fishbein and Ajzen's expectancy value model applied to nuclear freeze attitudes. When the four reliable MWAQ subscales were administered to 97 undergraduates and correlated with the eight McClenney subscales, 14 of 32 correlations were significant. Hamilton and others' nuclear threat philosophy scale measured eight stances: deterrentist; survivalist; romanticist; hedonist; eliminationist; stoic; disarmist; and altruistic fatalist. These subscales and the four reliable MWAQ subscales were administered to 46 undergraduates, and only four of 32 coefficients were correlated. Five tables and definitions of the eight nuclear threat attitudes are appended. (GDC)

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The Measurement of Nuclear War Attitudes: Methods and Concerns[1]

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Running Head: Nuclear War Attitudes

TM 860 537

The Measurement of Nuclear War Attitudes: Methods and Concerns

Psychologists in ever increasing numbers have been investigating various attitudes toward the threat of nuclear war and other nuclear war issues. The general importance of this timely social issue is unmistakable. Given that the perception of the threat of nuclear war has been hypothesized to have negative effects on personality development (Escalona 1982; Gearheart, 1984) and shown to have a self-reported negative effect on the lives of some adolescents (Blackwell and Gessner 1983) and some college students (Hamilton, Chavez and Keitlin, 1985), the issue of nuclear war has specific relevance to psychologists. Levinger (1983) has described the arms race and threat of nuclear war as the most critical social issue of today.

In reviewing the expanding literature dealing with nuclear war attitudes a limited picture of individual responses to the nuclear threat is emerging. A comprehensive review of this literature by Fiske (1985) describes the typical American adult as someone who views nuclear war as a low probability event and does not worry about it often although they report considerable fear when they do worry about it. Americans are a very heterogeneous group and the model response pattern does not appear to be indicative of a sizeable number who worry often about nuclear issues (Kramer, Kalick and Milburn, 1983). With these generalizations, as with others which have been made, the responsible reviewer is forced to carefully qualify statements as being "tentative" or "discussed cautiously" (e.g. Fiske 1985; Hamilton, Chavez and Keitin, 1985; Mayton, 1985, In press). To be sure, these qualifications are a function of the relatively recent focus of time and resources to understand the complex

processes inherent in citizen responses to the threat of nuclear war. However, the fact that most researchers have tended to work in isolation, developing their own attitudinal scales, has made the determination of comparability of findings more difficult. Significant differences in data collection strategies, respondent characteristics as well as scale differences in the format, word selection and the ordering of items along with other measurement concerns contribute to this synthesis problem.

This paper addresses three measurement issues relevant to the synthesis of research on adult nuclear war attitudes. First, this paper reviews some major measurement techniques employed in the assessment of attitudes toward nuclear war issues. The intent of this review is not to be exhaustive but to critically discuss some representative scales which are noteworthy. It is hoped that readers who find a scale which meets their research needs would use a previously developed scale whenever appropriate to aid in the synthesis of research findings across diverse settings and samples. Second, this paper provides new data concerning the characteristics of the measurement scale developed by Mayton (1984) plus its interrelationships with scales developed by McClenney, Neiss, Kirsh and Kenny (1984) and Hamilton, Chavez and Keitlin (1985). And third, this paper describes general psychometric, theoretical and interpretational concerns in the measurement of nuclear war attitudes with the intent of providing direction for future research.

Review of Selected Self-Report Measurement Methods

A wide range of strategies have been employed to assess nuclear war attitudes. Face to face interviews (e.g. Jeffries 1974; Beardslee and Mack 1982; Tyler and McGraw 1983) and telephone interviews (e.g. Fiske, Pratto and

Pavelchak, 1983;) will be eliminated from this discussion, due to time constraints, with attention given solely to written self-report questionnaires.

The most common approach to the measurement of nuclear war attitudes involves the use of Likert-type or some variation of Likert-type items. Respondents to these questionnaires are presented with statements with nuclear war content and are asked to respond on an agree-disagree continuum or on some other set of alternatives involving continuums such as probable - not probable, definitely - definitely not, necessary - unnecessary, etc.

In many instances researchers have used single items as dependent variables (e.g. Gutieries et al, 1984, Polyson et al, in press; Zweigenhaft, 1985; Johnson 1985). For example, Zweigenhaft (1985) reported using a questionnaire including 27 attitude items and 10 knowledge items. With broad item content spanning issues related to probability, degree of destruction, survivability, arms reduction and degree of worry about nuclear war, the Zweigenhaft questionnaire has been used to document the differential effects of various educational materials. In another noteworthy example, Johnson (1985) has reported using a shorter scale assessing the probability of nuclear war, the probability of survival and the probability of more specific outcomes such as dying of radiation sickness and becoming blind. Many of Johnson's items differentiated college students who viewed the movie "The Day After" from those who did not. Both the Zweigenhaft (1985) and the Johnson (1985) questionnaires may prove to be highly useful scales and the fact that each has successfully been used to differentiate adults exposed to various attitude change stimuli is encouraging. However, concerns related to psychometric adequacy of these questionnaires and others like them in the literature have not been addressed. Issues of item reliability are concerns, as well as, the degree of independence of individual items on each scale. While Zweigenhaft (1985) reported 17

significant attitudinal differences (out of a possible 27) between groups exposed to different educational stimuli, it is not clear how many of these are independent phenomenon and how many items are redundant measures of the same construct. In fact there appears to be clusters of items with a considerable amount of commonality regarding item content within each of these questionnaires. Empirical investigation of the latent variables or constructs assessed by these questionnaires would be advisable at this time.

Other researchers have reported data based on questionnaire subscales determined using an a priori process of content review. For instance, Nelson (1985) developed and utilized a 20-item questionnaire with items grouped into several subscales. These subscales have been labeled as arms control opinion, concern about superiority, Soviet arms control intentions, Soviet military goals, war probability, war effects and anxiety. The significant effects that classroom lectures on the topics of arms control and the threat of nuclear war have on nuclear war attitudes have been demonstrated with several of these subscales. Again, this questionnaire may prove to be highly useful to other researchers and the data provided are encouraging. However, evidence related to the subscales' psychometric adequacy are lacking. Of particular concern is evidence of subscale stability, internal consistency and independence.

One questionnaire presently being utilized in research on attitudes toward nuclear war is the Modified World Affairs Questionnaire (MWAQ) developed by Mayton (1984). This 23 item questionnaire is a composite of items from three other scales. The core of the MWAQ is the World Affairs Questionnaire developed and reported by Novak and Lerner (1966). The 12 Novak and Lerner items assess respondents views of the probability of nuclear war, the outcome of nuclear war, and civil defense. To this core five items were added from the questionnaire developed and reported by Mayton and Delamater (1983). These five items assess how often a respondent thinks about nuclear war, how worried

a respondent becomes when they do, how much impact on arms control policy a respondent perceives having and arms control talk preferences. The final six items were written versions of the interview questions used by Jeffries (1974). These six items assess attitudes toward the use of nuclear weapons, the communists, civil defense and the need for patriotism in this country. While the MWAQ was subjected to a principal components analysis and eight orthogonal factors were identified and used as subscales, data regarding the reliability and validity have not been available. The second section of this paper provides preliminary information regarding the MWAQ's psychometric adequacy.

McClenney, Neiss, Kirsch and Kenny (1984) reported using a 42 item questionnaire with five subscales based on Fishbein and Ajzen's (1975) expectancy-value model applied to nuclear freeze attitudes. In addition, three subscales which assess psychological responses to the threat of nuclear war are included. The expectancy-value model constructs were labeled behavioral beliefs, outcome evaluations, normative beliefs, motivations to comply and intentions to act. The psychological threat response constructs were labeled denial of threat, control of threat, and responsibility for social action. Data are presented regarding subscale homogeniety. Alpha coefficients ranged from .62 to .96 for two different samples except for one value slipping down to .41. Discriminant validity indices are also presented in support of scale independence. These preliminary efforts to establish important psychometric characteristics of the McClenney et al (1984) scale are noteworthy and positive. No evidence regarding the stability of subscale scores over time have been provided. Also no validity evidence apart from the previously cited discriminant validity data has been forthcoming. Given the highly positive psychometric support for this scale to date, plus its theoretical orientation, additional research seems to be warranted.

A rather unique approach to the measurement of nuclear war attitudes has been utilized by Hamilton, Chavez and Keitlin (1985). Their scale presents respondents with eight short paragraphs which reflect different cognitive/emotional stances or philosophies regarding the nuclear threat. Each respondent indicates whether they agree or disagree on a five point scale to nuclear threat philosophies which are described as deterrentist, survivalist, romanticist, hedonist, eliminationist, stoic, disarmist or altruistic fatalist. The paragraphs for each nuclear threat philosophy are presented in the appendix. Hamilton et al (1985) provide evidence for the distinctness and nonoverlapping nature of these nuclear threat philosophies or attitudes. While stability estimates have not been forthcoming, Hamilton and his associates have been collecting data over the last two years relating the eight nuclear threat philosophies to item responses on a more traditional Nuclear War Questionnaire (NWQ). This data has provided preliminary support for the validity of the nuclear threat philosophy scale. Further research for the Hamilton et al nuclear threat philosophy scale appears very likely to be fruitful.

Psychometric Characteristics of the MWAQ

The MWAQ was reanalyzed using a factor analytic interpretation strategy to identify homogeneous clusters of items. The process of identifying comparable common factors has been described and demonstrated by Harris (1967) and Harris and Harris (1971). Harris and Harris (1971) recommended using three or four different algorithms to determine initial factor solutions for a single data set. Then each of these initial solutions are used to obtain a derived orthogonal and a derived oblique solution. A comparable common factor is then

defined as a factor having two or more of the same relevant variables on a majority of the derived solutions. In this fashion only the most robust factors are retained for interpretation.

Four initial factor methods were utilized in applying the Harris and Harris (1971) factor analytic interpretation strategy for the MWAQ. These included an Alpha solution, a Harris R-S^2 solution, a maximum likelihood factor solution and an incomplete principal component solution using the Statistical Analysis System computer package. Each of these four initial solutions were then rotated using the normalized varimax and Harris-Kaiser independent cluster algorithms. A comparable common factor was determined to be one which had two or more of the same relevant variables on at least five of these final solutions. A relevant factor was defined to be one with a loading greater than the absolute value of .30. Using this process five robust factors were determined from a data set of 178 college student respondents collected in the fall of 1983. The names of these five factors and the items included in these factors are presented in Table 1.

Insert Table 1 About Here

Based on the factor analyses, five subscales of the MWAQ were created by summing individual responses for each item which had relevant loadings on each factor. The civil defense subscale consists of 4 items with high scores reflecting beliefs in an effective civil defense. The escalation subscale has 3 items with high scores indicating a strong resolve to use military force at the highest levels to win any conflict. The nuclear war outcome subscale has 4 items with high scores reflective of more destructive views of the consequences of a nuclear war. The probability/worry subscale consists of 5

items. High scores for this subscale indicate nuclear war is more probable and that the respondent thinks about nuclear war more often, is more worried about it and has more nightmares concerning nuclear war. The patriotic subscale consists of 2 items with high scores reflecting a greater need to combat the communist threat with more patriotism. College students in an introductory psychology course volunteered to complete the MWAQ as part of their course requirements in September 1983, January 1984, September 1984, January 1985 and again in September 1985. The sample sizes for each administration was 186, 62, 199, 98 and 70 respectively. The internal consistency of each subscale was determined by the computation of coefficient alpha for each sample. The range of values plus the mean and the median of the alphas for each subscale are presented in Table 2. The subscale stability was determined by computing the test-retest reliability coefficients. A total of 60 of the September 1985 sample completed the MWAQ five weeks later during October 1985. The test-retest reliability coefficients are presented in Table 2. The test-retest reliabilities appear to be acceptable for research purposes and generally indicate that the five subscales possess some stability. The internal consistency for the subscales as addressed by coefficient alpha is problematical. Values which average in the upper .5 to .6 range are low even for attitudinal measures, however, Nunnally (1967) indicates that these modest values may suffice in the early stages of research on a construct. Therefore, the civil defense, escalation, nuclear war outcome and the probability/worry subscales appear to have adequate reliability for exploratory research purposes although efforts to improve each scale's homogeneity are certainly needed. The patriotic subscale with average alpha values in the .40 range exhibits less than marginal homogeneity and improvements in this scale are probably needed before it is utilized.

Insert Table 2 About Here

The discriminant validity of the subscales was investigated using the combined sample used in assessing the test-retest reliability. The relative independence of the subscales can be seen in Table 3.

Relationship Between MWAQ and Selected Nuclear Attitude Scales

During November 1984 a total of 97 introduction to psychology students completed the MWAQ and the McClenney et al (1984) questionnaire as posttests in an experimental study and as part of another research activity. Correlations between the four reliable MWAQ subtest scores and the eight McClenney et al subtest scores are presented in Table 4. Fourteen of the thirty two computed correlations were significant.

Insert Table 4 About Here

As indicated previously five of the McClenney et al (1984) subscales reflect variables within Fishbein and Ajzen's expectancy-value model regarding attitudes toward nuclear freeze activities. The correlation data presented in Table 4 demonstrates low to moderate relationships between the variables in this model and the more general attitudes toward nuclear war measured by the MWAQ. The more positive respondents evaluated the nuclear freeze as an outcome in arms talks (high outcome evaluations), the less likely they were to advocate escalation as a strategy to win a nuclear war. The more destructive a respondent viewed the outcome of a nuclear war, the more favorable their

outcome evaluation of a nuclear freeze was deemed to be. More positive evaluations of the ability of political actions to bring about a freeze (high behavioral beliefs) were significantly although marginally associated with views that a nuclear war is more probable and with higher levels of worry. Respondents who perceived significant others as wanting them to support a nuclear freeze (high normative beliefs) tended to view escalation in nuclear war less favorably and the outcome of a nuclear war as more destructive. Stronger intentions to support a freeze and to take political action on the issue of arms control (high intentions to act) was associated with views that nuclear war was more probable, higher levels of worry, more destructive views of nuclear war and less supportive views of escalation strategies.

The McClenney et al (1984) denial of threat subscale correlated negatively with MWAQ nuclear war outcome and probability/worry subscales. Persons with high levels of denial, as measured by the McClenny et al subscale, viewed nuclear war as less destructive and less probable plus worried less about it. All four MWAQ factors correlated significantly with the McClenny et al responsibility for social action subscale. The stronger the self-reported social responsibility, the less likely respondents were to view civil defense efforts as effective and the less likely they were to support escalation of a nuclear conflict to win. Also higher levels of worry about a nuclear war, more probable evaluations for a nuclear war occurrence and the beliefs that a nuclear war will be more destructive than many think it will be, all tended to be associated with higher levels of responsibility for social action.

A total of 46 introduction to psychology and statistical methods students completed the MWAQ and the Hamilton et al (1985) nuclear threat philosophy scale during March 1986. The correlations between the four reliable MWAQ subscales and the evaluations of the eight cognitive/emotional stances of these respondents are presented in Table 5. Only four of thirty two

coefficients are statistically significant and these are not very large in magnitude. Respondents with more positive opinions of the effectiveness of civil defense tended to hold more positive views of the eliminationist and the survivalist stances. Respondents who held more positive evaluations toward the escalation of a nuclear conflict to win tended to view the deterrentist philosophy more positively. Respondents who believed the outcome of a nuclear war would be less destructive than many describe it to be tended to be more stoic in their views.

Insert Table 5 About Here

Critical Issues Regarding Nuclear War Attitude Measurement

The need to understand the concepts relevant to the potentially catastrophic issue of nuclear war has been apparent to all of us who have actively contributed to this research literature. The wide range of measurement scales assessing attitudes toward nuclear war has been productive in exploratory research and preliminary investigations. The diversity of nuclear war attitude questionnaires has had some positive implications when general consistencies are observed in findings across different item wordings and settings. No matter how items are phrased or how response alternatives are organized the average adult views nuclear war as fairly unlikely (Fiske 1985). The diversity of items and questionnaires assessing similar content has contributed to increased generalizability.

As research moves beyond these initial descriptive endeavors the need for measurement scales known to be psychometrically sound becomes more crucial. The verification of construct relationshps in the complex models needed to

explain the development of nuclear war attitudes, the impact of the nuclear threat and the methods for changing these attitudes requires sensitive measurement scales. Clearly, more time needs to be spent documenting subscale reliability (both internal consistency and temporal stability) and subscale validity beyond the content level. The issue is not that measurement scales are being used which are known to be unacceptable regarding the psychometric characteristics. The issue is that reliability and validity data are just not provided. This paper has documented marginally acceptable reliability estimates for the subscales of the MWAQ and preliminary data regarding its validity. Additional items need to be added to these MWAQ subscales to improve its usefulness. The McClenny et al (1984) scale also appears to be acceptable given its psychometric properties.

Since the data reported in this study was collected, three other attitude questionnaires have been brought to my attention which have documented positive psychometric properties. Newcomb (1985) developed and reported extensive evidence for the psychometric worthiness of a 15 item questionnaire. Newcomb used a sequence of exploratory then confirmatory factor analyses to identify four factors in his Nuclear Attitude Questionnaire. These factors were labeled nuclear concern, nuclear support, fear of the future and nuclear denial. High factor intercorrelations (absolute value between .37 and .86) imply a second order general nuclear anxiety factor. Kierulff and Zippin (1985) have also refined a questionnaire with several subscales documented to be homogeneous. The most rigorous attempt to determine the reliability and validity of an attitude device found to date has been the work of Larsen (1985). Extensive evidence regarding item analysis, reliability and validity of this unidimensional scale of nuclear disarmament attitudes are provided.

While the diversity of nuclear war attitude questionnaires has had positive ramifications, it has made the synthesis of this literature more

cumbersome, especially when inconsistent results are observed. The order of items in a survey can have an impact on how individuals respond to an issue (Babbie, 1982). The effect of the position in which the more emotionally arousing items are placed needs to be investigated. When these concerns are combined with local and unrepresentative samples, the comparability of results across studies has the potential to become too intuitive and less objective. In light of these concerns more researchers should utilize questionnaires developed by others with their own whenever possible. With this increased data regarding scale interrelationships the more robust concepts will emerge and reasons for inconsistent findings will hopefully become more apparent. In addition more researchers need to replicate the work of others to cross validate significant findings. With grant money more difficult to obtain for representative sampling of large geographic regions, representative samplings might be roughly approximated by networks of researchers working in various sections of the country. Even if this is not achievable the replications would still increase the generalizability of results.

Another issue of concern has been the general atheoretical nature of measurement scales assessing nuclear war attitudes. Most questionnaires have no theoretical underpinnings but attempt to identify relevant constructs within the nuclear was attitude domain in an intuitive fashion. More efforts similar to those utilized by McClenney and her colleagues are needed to apply established social psychological models to this area of research.

Another concern relates to the labeling of subscales which have been identified using a factor analytic or clustering procedures. Many investigators have labeled the subscales of their questionnaire using general terms such as those used in the MWAQ. Other investigators have labeled some of their subscales based upon clinical speculation in the nuclear threat literature and/or value judgements. An example of this involves the

identification of subtests as denial factors. It is not always clear what is implied by this label in this context. Items which cluster into the "denial factors" (e.g. McClenney et al 1984; Newcomb 1985) include the degree of worry and indicators of survivability or probability of nuclear war. The higher the likelihood and the lower the survivability of nuclear war the more people worry. Persons who view nuclear war as less probable and more survivable worry less and are classified as manifesting denial. While the observed correlations between these issues may be necessary for denial to be present, the response patterns to these items are not sufficient conditions to make a judgment. Denial is a dynamic process which may have adaptive as well as maladaptive implications (Hamilton et al, 1985). Labeling constructs with value laden terminology should be done cautiously with cleaner validation evidence.

A better understanding is needed regarding how nuclear war attitudes develop, how to change nuclear war attitudes, what the psychological impact of the threat of a nuclear war is, and how to increase behaviors which promote peace. The complex processes involved in dealing with each basic question must be measured using sound measurement scales. Greater attention to the measurement concerns raised in this paper will hopefully help humankind turn back the hands of the nuclear clock before it strikes midnight.

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Table #1

MWAQ Factor Items

Civil Defense Factor

7. If we prepare now with shelters, etc., we may be able to save a majority of those lives that would have been lost in a nuclear war.

agree very much	agree somewhat	agree a little	disagree a little	disagree somewhat	disagree very much

11. A private bomb shelter would be worth its cost in providing security in the world today.

agree very much	agree somewhat	agree a little	disagree a little	disagree somewhat	disagree very much

12. How valuable would it be for you to know more about the effects of a nuclear blast and fallout on a civilian population?

very necessary	moderately necessary	slightly necessary	slightly unnecessary	moderately unnecessary	extremely unnecessary

23. Do you think a stepped-up civil defense program would increase your chances of surviving a nuclear attack?

a great deal	somewhat	not very much	not at all

Escalation Factor

18. We should be ready to use nuclear weapons against any country that threatens our national interest.

strongly agree	partially agree	partially disagree	strongly disagree

19. If this country is involved in a war, we should not worry about civilian casualties, but should use all possible force necessary to win.

strongly agree	partially agree	partially disagree	strongly disagree

20. When a country gets involved in a war, the only thing to do is to use all-out military force against the opponent.

strongly agree	partially agree	partially disagree	strongly disagree

Nuclear War Outcome Factor

3. If a nuclear war were to occur, the outcome would probably be _____ than most people expect.

much more disastrous	somewhat more disastrous	slightly more disastrous	slightly less disastrous	somewhat less disatrous	much less disastrous

4. Most people tend to _____ the destructive effects of nuclear weapons.

greatly overestimate	moderately overestimate	slightly overestimate	slightly underestimate	moderately underestimate	greatly underestimate

6. If there were a nuclear war with the Communists, _____ (circle only one)
   a. life will be much better--especially with the Communist menace ended.
   b. life will be somewhat better--people will work hard and rebuild our country.
   c. life will be much the same as it is today--we will go to school, work, have dates, etc.
   d. there will be some changes--people will have to struggle again.
   e. the widespread damage will mean that almost everyone will be faced with poverty and disease.
   f. almost everything will be different--so many people will be killed and maimed that life will be closer to the jungle than anything we know today.

9. When I read about ways to prepare for the possibility of a nuclear attack, I tend to become _____.

greatly reassured	moderately reassured	slightly reassured	slightly uncomfortable	moderately uncomfortable	extremely uncomfortable

Probability/Worry Factor

1. Considering all factors, nuclear war with the Communists is _____.

almost certain	probably will occur	slightly likely	slightly unlikely	probably will not occur	definitely will not occur

5. How likely is it that the Russians would launch a nuclear attack against the U.S. if they believed they could do so and suffer little loss to themselves?

certain	probably the case	slightly likely	slightly unlikely	probably not the case	definitely not the case

13. How often do you think about the possibility of nuclear war?

always think about it	about once a day on the average	about once a week on the average	about once a month on the average	about once a year on the average	rarely think about it

14. When you think about nuclear war, how worried do you generally become?

not worried at all	somewhat worried	moderately worried	extremely worried

15. How often have you had a nightmare or unpleasant dream abut an atomic explosion or nuclear war?

Never	Once or twice	Several times	Often	Regularly

Patriotic Factor

21. The communist conspiracy is a real threat to our country.

strongly agree	partially agree	partially disagree	strongly disagree

22. What we need in this country is more patriotism.

strongly agree	partially agree	partially disagree	strongly disagree

Table 2

Reliability Data for MWAQ

MWAQ Factor	Number of Items	Test-Retest[1] Coeficient	Alpha Coefficients		
			Range[2]	Mean	Median
Civil Defense	4	.69	.62 - .83	.71	.72
Escalation	3	.80	.67 - .73	.69	.68
Nuclear War Outcome	4	.78	.54 - .62	.59	.59
Probability/Worry	5	.81	.48 - .74	.58	.59
Patriotic	2	.78	.35 - .67	.49	.46

[1] Based on a sample of 60 with a five week interval.

[2] Based on five separate student samples which varied in size from 60 to 199.

Table 3

Discriminant Validity of MWAQ Subscales

MWAQ Subscale	Civil Defense	Escalation	Nuclear War Outcome	Probability/ Worry
Civil Defense				
Escalation	.20			
Nuclear War Outcome	-.09	-.26		
Prabability/Worry	.23	.05	-.03	
Patriotic	.33	.48	-.25	.21

Table 4

Correlations Between MWAQ and McClenney et al (1984) Questionnaire[1]

McClenney et al (1984) Subtests	MWAQ Factor			
	Civil Defense	Escalation	Nuclear War Outcome	Probability/ Worry
Outcome Evaluation	-.16	-.45**	.33**	.05
Behavioral Beliefs	-.02	-.20	.16	.26*
Normative Beliefs	.01	-.28*	.23*	.12
Motivation to Comply	.06	-.17	-.13	.18
Intentions to Act	-.03	-.38**	.40**	.39**
Denial of Threat	.04	.13	-.47**	-.68**
Control of Threat	-.01	-.18	.10	-.08
Responsibility for Social Action	-.33**	-.29**	.37**	.27*

[1] n = 97

* significant at the .05 level

** significant at the .01 level

Table 5

Correlations Between MWAQ and Hamilton et al (1985) Philosophy Ratings[1]

Hamilton et al (1985) Philosophy	MWAQ Factors			
	Civil Defense	Escalate	Nuclear War Outcome	Probability/ Worry
Romanticist	.20	.29	-.19	-.12
Hedonist	.28	.26	.05	.03
Stoic	.25	.02	-.30*	-.15
Deterrentist	.26	.38*	-.22	-.15
Altruistic Fatalist	-.10	.01	-.22	.10
Disarmist	.17	.01	.01	-.06
Eliminationist	.34*	.13	-.23	.02
Survivalist	.49**	.24	-.21	-.06

[1] n = 46

* significant at the .05 level

** significant at the .01 level

Descriptions of the Eight Nuclear Threat Attitudes (Hamilton et al,1985)

Deterrentist

Nuclear war can be prevented through building and maintaining a strong nuclear arsenal. As a result of the balance of power and the recognition that there will be no winners in a nuclear exchange, maintaining our nuclear strength will continue to provide effective deterrents to global conflict.

Survivalist

Nuclear war is a distinct possibility but survivable if appropriate precautions are taken. By investing time, money, and energy into the construction of blast and fallout-proof shelters that will accommodate large groups of people (myself, family, friends) comfortably for several months, we would survive, rebuild, and go on to build a better world.

Romanticist

Because human beings are basically good (i.e., rational, caring, desiring self-preservation for all people), nuclear war will never occur. In a nuclear crisis, political leaders will act rationally for the good of all humanity and nuclear war will be prevented.

Hedonist

Since nuclear war is a distinct possibility, the best one can do is to concentrate on getting the most pleasure out of the life today. The focus of attention is best placed on personal pleasure, feeling good, and getting what I want out of life in the time remaining.

Eliminationist

Since nuclear war is a distinct possibility due to the political stance of the Soviet Union and the fact that the USSR cannot be trusted, the best solution is to eliminate the threat. A prompt, unexpected, first-strike by the United States would eliminate the communist threat and preserve life and the democratic ideal throughout the world.

Stoic

Nuclear war is a distinct possibility and there is not much anyone can do to prevent it or survive it. Yes, there would be casualties and destruction, but some people would survive, eventually rebuild, and life (perhaps even better than it is now) would go on.

Disarmist

Nuclear war can be prevented through active, vocal effort on the part of concerned citizens to convince world powers to disarm. There will be no nuclear war if there are no nuclear weapons.

Altruistic Fatalist

Since nuclear war is a distinct possibility and I am realistically unable to lessen the threat, why worry about it? The best I can do is to use my available talents and abilities to make the lives of my fellow human being better and contribute to humanity in the best way that I can.